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ABSTRACT

This curriculum unit, intended for students in grade 6, covers the Mayas, Mayan history, and ancient civilizations. The unit was developed using Roger Taylor's collaborative team model "Connecting the Curriculum: Using an Integrated, Interdisciplinary, Thematic Approach." The unit addresses multiple intelligences, brain research, constructivist models of learning, and E. D. Hirsch's cultural literacy terminology. The unit accounts for individual abilities so that all students can participate and be successful. Each thematic set of activities lists resources needed, the anticipatory set, the activity performed, and the product created. Resource lists contain poetry; people; books for students; books, periodicals, and software for teachers; and Web sites. (BT)

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"Mayan Eyes Have Seen the Glory..."
or
'Please Don't Squeeze the Shaman!"

An Interdisciplinary, Integrated, Thematic Study 'Chaac' Full of Culture and 'Jaded' History of the Mayan Civilization

submitted by
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ABSTRACT

This curriculum unit was developed using Roger Taylor's collaborative team model: "Connecting the Curriculum: Using an Integrated, Interdisciplinary, Thematic Approach." Six educators were involved with brainstorming ideas, researching accurate information, gathering materials, and structuring the goals and objectives. The unit addresses multiple intelligences, brain research, constructivist models of learning, and Hirsch's cultural literacy terminology, along with consideration for individual abilities so all students can participate and be successful. Modifications and accommodations can be made within each lesson and activity. It does not incorporate any elements of style such as MLA or APA. The completed unit was submitted to Roger Taylor for dissemination on his website in August, 2000.

After the initial weeklong class which included intensive coursework and culminated in the project, I refined and re-worked the content and the format for clarity. Included are some definitions of terms, and delineation of anticipatory sets, class activities and student-centered products. This unit comprises a database of resources and ideas that can be used by any teacher, but is specifically aligned with Wyoming State Standards and Benchmarks.

This curriculum unit is written for [illegible]

This curriculum unit covers the following 3 main subjects:

1. Mayas
2. Mayan History
3. Ancient Civilizations

[illegible]KEY/INTEGRATE

OVERVIEW

I. **CONTENT: (Why is this unit important?)**

"We are all at the mercy of a universe we cannot control. And so, particularly at times when events of great importance arise, we struggle to discover ways to appease nature or find help. In modern cultures this struggle might include scientific research; the classic Maya had their own methods, based on their own beliefs."

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This unit is important because the legacies of the Mayan culture continue to impact many facets of contemporary life, including place value, zero, architecture, astronomy, calendar. There are valuable lessons to be learned through studying an ancient civilization that once flourished and then vanished, and by doing so, we can improve the quality of our own lives.

II. **PROCESS: (How are the thinking skills developed?)**

In this unit thinking skills will be developed through activities where students:

- analyze and synthesize information
- engage in activities that promote divergent thinking
- work independently, work together in small groups, and work cooperatively in large groups
- employ research skills
- form creative associations of ideas across discipline areas
- create various products that lead to an in-depth appreciation for and understanding of the relevance of the Maya Civilization
- demonstrate their knowledge of applications from the Maya people to real-life situations

II. **PRODUCT: (What will kids do/know as a result of this unit?)**

Students will:

- Understand the importance of protection and preservation of culture.
- Appreciate the legacies of the Mayans.
- Compare and contrast the Mayans to American culture.

Unit Overview Alignment with
State/District Student Performance Outcomes

GOAL 1: Students will learn how the Mayans understood their place in the universe.

GOAL 2: Students will learn the social, political and cultural system of the Ancient Mayas.

GOAL 3: Students will explore the relationship between the culture of the Ancient Maya and the American culture.

GOAL 4: Students will identify the legacies of the Mayan.

I-SEARCH INDEPENDENT RESEARCH PROJECTS FOR GIFTED AND TALENTED [illegible]

State each research project with an investigative focus and a "hands-on" product to show research outcome.

1. PARADOXES: -common notions not necessarily true in fact
-self-contradictory statements or observations

Because of the importance of nature to Mayan religion, it is assumed that Mayans conserved their environment. Slash and burn techniques for clearing land are used today by Mayan descendents who inherited the practice from their ancestors.

PRODUCT: Write and present a drama to the class depicting what is happening in the rainforest today and the impact it has worldwide.

2. [illegible]: -inherent properties
-conventional symbols or identities
-ascribing qualities

Some elements of the environment were important to the Maya.

PRODUCT: Design a series of postage stamps depicting symbols of nature sacred to Mayans.

3. [illegible]: -situations of likeness
-similarities between things
-comparing one thing to another

The Maya civilization was centered around their religion.

PRODUCT: Research the beliefs of our local Native American tribes, the Shoshone or Arapahoe, with those of the Mayas. Present your findings on a backboard or in a power point presentation.

4. [illegible]: -gaps of limitations in knowledge
-missing links of information
-what is not known

There are differing opinions concerning the decline and disappearance of Mayan civilization.

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PRODUCT: Prepare a news report for the evening news program "Your News and Mayan" with late-breaking news information explaining their disappearance.

5. PROVOCATIVE QUESTIONS: -inquiry to bring forth meaning
-incite knowledge exploration
-summons to discover new knowledge

Ruler-priests performed ceremonial bloodletting while using hallucinogens in order to form a vision for the future of the Mayans.

PRODUCT: Develop a debate for or against continuance of this practice.

6. EXAMPLES OF CHANGE: -demonstrate the dynamics of things
-provide opportunities for making alterations
modifications, or substitutions

Spain colonized the Mayan areas of Central America.

PRODUCT: As governor of this area of "New Spain," write the laws you will pass to govern your new subjects.

7. EXAMPLES OF HABIT: -effects of habit-bound thinking
-building sensitivity against rigidity in ideas

The Mayans always planted maize at a certain time. This year there is a drought. Traditionally there would be a human sacrifice to the rain god, Chaac. As governor, you desire other alternatives.

PRODUCT: Design a model or prototype of your solution to this problem.

8. ORGANIZED RANDOM SEARCH: -use a familiar structure to build another
-an example from which new approaches occur at random

Pyramids were central to the Mayan civilization.

PRODUCT: Determine the strengths and weaknesses of a Mayan pyramid. Create a model of a pyramid incorporating all of the strengths and no weaknesses.

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9. **SKILLS OF SEARCH:** -search for ways something has been done (historical search)
-search for the current status of (descriptive search)
-set up an experimental situation and search for what happens (experimental search)

Archaeology has allowed us to uncover information about the agrarian Mayan culture.

PRODUCT: Research how the Mayans farmed in the past by studying ethnobotanist's findings. What methods do the Mayan descendants employ today? Design an experimental hydroponics farm. Maintain records from planting through harvest.

10. **TOLERANCE OF AMBIGUITY:** -provide situations which puzzle, intrigue or challenge thinking
-pose open-ended situations which do not force closure

The Maya civilization developed an intricate way of documenting time.

PRODUCT: Look at a Mayan ceremonial calendar. Prepare a user-friendly guide for using the Mayan calendar.

11. **INTUITIVE EXPRESSION:** -feeling about things through all senses
-skill of expressing emotion
-be sensitive to inward hunches or nudges

The Mayans sometimes used human sacrifices in their ceremonies.

PRODUCT: Create a pantomime expressing the emotions of a slave mother whose only child has been selected as the next sacrifice.

12. **ADJUSTMENT TO DEVELOPMENT:** -learn from mistakes or failures
-develop from rather than adjust to something
-develop many options or possibilities

Historians are not sure what caused the demise of the Maya civilization.

PRODUCT: Based on the assumption that the Mayan civilization disintegrated due to poor agrarian practices, create a chart comparing Mayan farming practices with alternative practices, which would have allowed their civilization to survive.

13. STUDY CREATIVE PEOPLE AND PROCESS: -analyze traits of eminently creative people
-study processes which lead to problem-solving, invention, insight

The Maya held their priests and educated people in high esteem.

PRODUCT: Write a letter of recommendation for Albert Einstein to be admitted to the University of Chichen Itza.

14. EVALUATE SITUATION: -decide upon possibilities by their consequences and implications

The government of the Maya people included a caste system.

PRODUCT: Create a timeline showing the outcomes over time of a lower class revolution against the Mayan king and noble.

15. CREATIVE READING SKILL: -develop a mind-set for using information that is read
-learn the skill of generating ideas by reading

Read the following poem by Humberto Ak' abal:

Prayer
In the churches
You can only hear the prayer
Of the trees
Converted to pews.

PRODUCT: Write a collection of poems based on what you have learned about the Maya people. Read them to a selected audience.

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16. CREATIVE LISTENING SKILL: -learn the skill of generating ideas by listening
-listen for information allowing one thing to lead to another

Listen to Mayan legends that explain why/how something happens in nature. Interpret the Mayan explanation according to scientific principle.

PRODUCT: Present your finding in a written paper, orally, or in an illustrated nonfiction picture book format.

17. CREATIVE WRITING SKILL: -learn the skill of communicating ideas in writing
-learn the skill of generating ideas through writing

Every civilization has its own mythology, and the Maya were no different.

PRODUCT: Write a play or myth explaining the decline of the Mayan civilization.

18. VISUALIZATION SKILL: -express ideas in visual form
-illustrate thoughts and feeling
-describe experiences through illustrations

The Maya civilization can be traced from its beginning to its disappearance.

PRODUCT: Prepare a glyph mural depicting key events in the development of your community.

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CRITICAL THINKING SKILLS
[ACADEMIC]
ANALYZING HUMAN ACTIVITIES! (AHA!)
(The Foundational Activities of Humans)

1. PRODUCING, EXCHANGING, AND DISTRIBUTING [ECONOMICS]
   Resources: "The Structure of Maya Society" article in Calliope, The Ancient Maya, Trade game

[illegible]:

Anticipatory Set: Teacher and/or students read "The Structure of Maya Society."

Activity: Students will identify items common to the Mayan culture and environment.
e.g. costume, ornamentation, trade goods

[illegible]:

Activity: Bring examples of the trade items for students to examine.
Students will list the items from the article that might be used for trade.
e.g. shells, feathers, nuts, cocoa beans, maize, jade, obsidian

[illegible]:

Anticipatory Set: Set up a Mayan market in the classroom.
Activity: Students will negotiate with their peers at a Mayan mercado (market) using objects from the list.
Product: Students will make a display of the items they used to trade and explain how they were successful or unsuccessful.

[illegible] LINK:
Students will learn the Spanish word for the items listed for trade. If possible, the Quiche dialect for the Mayan word will be taught.

[illegible] LINK:
Students will make a mobile of different jobs involved in the Mayan trade/barter system.
e.g. merchant, trader, farmer, fisherman, gatherers, slaves

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Anticipatory Set: Play "Pay Day" or another trade game with class.
Activity: Discuss how the stock market works.
Product: Students prepare a barter and trade game in cooperative learning groups, using at least five items from their lists.

If we no longer had a monetary system in the U.S., what would we use to barter with in Dubois, WY? Explain.

Talk to your family. Have they ever bartered or traded anything in their life? Compare and contrast bartering to buying.

2. TRANSPORTATION

Resources: Video of *The Last of the Mohicans*, Book- *The Maya on the Rocks*

Anticipatory Set: View a film clip from *The Last of the Mohicans* showing transporting the captives by canoe.

Activity: Students describe types of transportation used by the Mayans.
e.g. canoes, baskets carrying royalty, traders walking
After reading page 97, "Commerce" in *The Mayas on the Rocks*, students identify exchange currency.

Activity: Students will predict or generalize what goods/products might have been transported by the listed modes of transportation.
e.g. slaves, shells

Anticipatory Set: Bring in a canoe, Have the students examine the construction. Discuss different types of canoes.
Activity: Go to a museum with a dugout canoe if possible or have an expert come and discuss canoes
Product: Students produce a model of a canoe, basket carrier, or trader's pack.

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...

...EL LINK:

Create a shopping list of foods that a Mayan would find in a grocery store of today.

e.g. corn, tomatoes, plantains, cocoa

Bring one food to share with the class

...E LINK:

Using maps, determine distances from the six city-states to each other.

...WING SKILLS ... :

Anticipatory Set: Make homemade French fries in class.

Activity: Students research on the internet about the origin of certain foods.

Product: Students create a map (world or hemisphere, etc.) tracing one food from its original source.

Trace the history of how that food is used today.

e.g. pizza with tomatoes from Maya- Aztec to Italy to America; potato from Andes/Inca to Europe (Ireland) to America (Idaho) to French fries.

... ASSIGNMENT:

Write about your daily transportation mode. Discuss how much time it might take a Mayan to travel the same distance you go each day. How will you be transported when you are 30?

: Discuss where the food you are eating for meals at home has come from. What is produced locally?

3. ...

Resources: glyphs on the internet site http://www.halfmoon.org/bul.html; *A Coloring Book of Incas*

:

Anticipatory Set: Show the David Stewart clip from the 2nd Voyage of the Mimi.

Activity: Students describe the Mayan system of writing.

e.g. tools used, method of writing

:

Activity: Students compare the Mayan system of writing to the Egyptian system of writing.

e.g. cartouches to Mayan alphabet

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APPLICATION:

Anticipatory Set: Bring in various cartoons. Discuss their messages.

Activity: Students construct a class cartoon about writing.

Product: Students write a glyph rebus story about the Mayans to share with a younger student or a peer.

BILINGUAL LINK:

Discuss the sound relationships used for glyphs in English sounds versus Spanish sounds.

e.g. "er" sound is one glyph

HUMANITIES LINK:

Using the page "Maya chief holding a manakin" from *A Coloring Book of Incas, Aztecs, and Mayas,* students will color the picture with authentic Maya colors and write a story that explains their interpretation of the glyph.

HIGHER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Class will sing Theme song from "Cheers".

Activity: Each student will invent a personal glyph depicting who he or she is.

Product: In cooperative learning groups students share their glyph, then together the group will develop a stela that incorporates all the glyphs to be presented to the class and displayed in the school.

PERSONAL JOURNAL ASSIGNMENT:

Would you rather write in glyphs, like the Mayans or Egyptians, or in English letters? How does your individual learning style impact your choice?

CLOSURE:

Discuss if you have a family crest or symbol, if not design one.

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4. PROTECTING AND CONSERVING

Resources: Clips from *Indiana Jones Raiders of the Lost Ark, Aladdin, The Maltese Falcon, and The Crucible* that include the scenes that show the artifacts being saved.

Anticipatory Set: Students watch specific film clips.

Activity: After watching the film clips, students will list ways they think they might save the Mayan ruins.

e.g. create parks, build fences,etc.

Activity: Students will defend the list they wrote by discussing the reasons with a peer.

e.g. posting signs

Anticipatory Set: Read and share articles about a rainforest.

Activity: Have representative from conservation group speak to the class.

Product: Students will complete a Venn diagram comparing student-generated lists to what actually is happening to protect the Mayan ruins.

LINK:

Use a T chart to compare and contrast the preservation of Native American artifacts to the preservation of Mayan artifacts.

Students will do an Internet search for preservation techniques of art antiquities.

THINKING SKILLS :

Anticipatory Set: Have a community member come and discuss the procedure for declaring a building/area a national historic site.

Activity: Students will find an artifact, historic building, area, etc. in their area that needs to be preserved.

Product: Students will devise a plan to preserve the area and share it with an authentic audience.

FINAL ASSIGNMENT :

You find a large arrowhead by a stream while you are hiking. You take it home and research it on the Internet finding out it is a

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rare find. You think it must be worth quite a bit of money. What do you do with the arrowhead?

: Discuss with your family artifacts or historical sites in your area. How are they being preserved? Do you have any ideas of things your family could do to help preserve these items?

5. PROVIDING EDUCATION
Resources: *Indiana Jones* film clip (taking the Jade ball from the Mayan temple), "Cortez the Killer", video- *Fern Gully*, video- *Dances With Wolves*

:

Anticipatory Set: Watch the clip from Indiana Jones.
Activity: Students list ways archaeologists learn from ancient civilizations.
e.g. hieroglyphs, jewelry designs, graves, sculptures, stelae

:

Activity: Brainstorm reasons why today's archaeologists believe the Mayan civilization vanished.
e.g. drought, war, disease, etc.

:

Anticipatory Set: Have class listen to and sing the song, "Cortez the Killer" by Neil Young.
Activity: Discuss why the Spanish wanted the Mayan civilization; yet when they conquered them they destroyed so much of the culture.
Product: Students create a collage from the Mayan artifacts the Spanish would have taken back with them. What would they have learned from these artifacts?

LINK:
Discuss another example of genocide of a culture. Discover some of the reasons one culture decides to annihilate another.

:
After viewing the clip of Dances with Wolves where Lt. Dunbar recorded in his journal what he learned about the Lakota discuss why the cavalry was so anxious to kill the Lakota after all Lt. Dunbar had learned about these people?

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HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: View the clip from Fern Gully (animals sick in the rainforest due to pollution)

Activity: Students research why the Anasazi and the Maya both disappeared without a trace. What have the archaeologists learned from studying their cultures?

Product: Students create a crossword puzzle giving 5 reasons across- what we learned from these cultures; down- why these cultures disappeared.

INDIVIDUAL JOURNAL ASSIGNMENT:

Discuss how people learn from other people. Be sure to include observations of the patterns found in graffiti, literature, and art work within a culture.

[illegible]:

Have you ever visited anywhere in North or South America where people vanished? What do you think happened to them?

6. MAKING AND USING **TOOLS AND/OR TECHNOLOGY**

Resources: video clips from "Tool Time", songs

[illegible]:

Anticipatory Set: Using "Tool Time" clips, show the inappropriate use of shovels and earthmoving machinery. Identify tools used today.
e.g. spoon, bus, zipper, buttons, etc.

Activity: Discuss what a tool is and why tools were developed.
e.g. time saved, money saved, etc.

[illegible]:

Activity: Students generalize a progression chart with timeline for the development of the shovel from Mayan to present.
e.g. hands to rock to stick, etc.

[illegible]:

Anticipatory Set: Sing the songs "John Henry" and "I've Been Working on the Railroad."

Activity: Students write a song or poem that would help get a task completed.

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Product: Students present class talent show with each person in costume performing his/her song or poem.

LINK:

After viewing the video Expedition #7 of the MIMI series students will list tools used for farming both in England and Central America.

:

Discuss the physics of levers, wheels, weight, and/or force.

THINKING SKILL :

Anticipatory Set: Read an article about a tool students would be unfamiliar with (doubletree).

Activity: Have students try to discern what the article is about.

Product: Students will create a tool for a specific purpose that they or their family could use.

ERNAL ASSIGNMENT:

Write a response to the proverb, "Necessity is the mother of invention."

:

Discuss the tools that your parents use in their professions and/or in your home.

7. PROVIDING RECREATION

Resources: video clips of Olympics, Internet

:

Anticipatory Set: View clips of the Olympics and recreation from around the world.

Activity: Students will list all types of recreation currently enjoyed in the local area. Develop a class list.

e.g. hunting, fishing, mountain climbing, biking

:

Activity: How many of the listed recreational activities could the Mayans enjoy or utilize?

e.g. races, throwing contests, etc.

:

Anticipatory Set: Demonstrate tic tac toe using a variety of natural materials.

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Activity: Access Bul (game similar to Chance) on the Internet http://www.[illegible]ision.html and have students play the computer game.

Product: Write a critique of the game from the standpoint of a winner and a loser.

[illegible]:

Have a soccer enthusiast visit class and tell about the origins of the game. Compare soccer to what we know about the Mayan ball game.

[illegible]ENCE LINK:

Compare the sizes of football, baseball, soccer, and Mayan ball fields- using scale drawings.

[illegible]INKING SKILLS

Anticipatory Set: Read poem, "Casey at the Bat".

Activity: Discuss the poem with applications to students.

Product: In groups, students will develop a Mayan team game using only natural resources, and will demonstrate the game to the class.

[illegible]AL ASSIGNMENT:

Defend the need for recreation and describe your favorite recreational activity.

:

Discuss the types of recreational activities your family engages in.

8. [illegible]RGANIZING AND GOVERNING

Resources: book- ***The Mayans on the Rocks***; video- *The Mayans*, ***Time*** article on caning **incident**, video clip of the trial scene from *Julius Caesar*

:

Anticipatory Set: Read text pp. 12-83 to determine the historical periods of their civilization.

Activity: Discuss the significance of each Mayan historical period.

e.g. classical, etc.

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COMPREHENSION:

Activity: Read pp. 45-47 from the text, distinguish the roles of the nobility in government. After reading pp.99-100, explain the Mayan law and compare it to the laws in our society.
e.g. priests to judges

APPLICATION:

Anticipatory Set: Show video clip from *Julius Caesar.*

Activity: Compare that clip to what we know about Mayan Government.

Product: Debate the issue of whether or not to vote in the next election.

MULTICULTURAL LINK:

Have community member of another ethnicity, come and talk to the class about government in their homeland.
e.g. Tim Qureshi (East Indian)

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Read the Time article about the American student who was caned for vandalism while living in Taiwan.

Activity: Discuss student views on the punishment.

Product: Students compose a political cartoon depicting the event.

INDIVIDUAL JOURNAL ASSIGNMENT:

Compare the role of our President to the role of the Mayan king.

REASON:

Who holds the role of ruler in your family structure? Does this change within situations or stay constant? How are your family rules developed?

9. MORAL, ETHICAL, AND SPIRITUAL BEHAVIOR

Resources: Prayer of corn, book- *The Mayans* (Covo), *The Mayas* (Bonechi); Video-*Black Robe*

KNOWLEDGE:

Anticipatory Set: Read "Prayer of Corn" by Humberto Ak'abal.

Activity: List those things the farmer considers sacred that should be worshipped.
e.g. forces of nature, crops, and environment.

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Activity: Read pp.48-61 of *The Mayas* (Covo), *The Mayas* (Bonechi); write a summary of environmental aspects that formed the basis of Mayan religion.
e.g. the sun, the moon, etc.

Anticipatory Set: Show a depiction of a Mayan city inhabited, then the Tikal ruins, overgrown and uninhabited.

Activity: Discuss and predict the religious explanations given for the disappearance of Mayan cities.

Product: Draw a glyph describing the "coming of the end".

The Spaniards brought Catholicism to Mayan territory in the 16th century. Compare Christian beliefs of Catholicism to Mayan beliefs.

Describe the role and importance an astronomer in Mayan society may have played in religion.

Anticipatory Set: Watch the video clip from *Black Robe* that shows the Jesuit priest being punished by the natives.

Activity: Prepare a debate based on the practice of converting the Mayans to Catholicism.

Product: Choose a popular tune and re-write the lyrics to reflect thoughts of someone who is forced to change a way of life.

You are Father Sahagun describing what religious beliefs of this new found Mayan tribe.

Discuss your spiritual beliefs with your family.

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10. AESTHETIC NEEDS

Resources: video clips from National Geographic, MTV, *Pretty Woman, Erin Brockovitch*

Anticipatory Set: View video clips of various cultural examples of beautiful people e.g. Africans- stretched necks; Japanese- broken feet; Hawaiians- plumpness.

Activity: Discuss fashion in various cultures.
e.g. dress, body adornment, etc.

Activity: In groups, identify ways the Mayans achieved their standard of personal beauty.
e.g. head flattening, tattooing, body painting, body piercing, head dresses

Anticipatory Set: View a video clip from MTV that shows the pop culture of today.

Activity: Discuss peer pressure in relation to fashion in contemporary culture.

Product: Create a Venn Diagram comparing the body adornments of the Maya to the pop culture of today.

SCIENCE LINK:

Have the local dentist visit class and talk about bone structure of the head, face, and teeth; what happens when teeth are pierced and foreign objects are implanted.

THINKING SKILLS

Anticipatory Set: View video clips from *Pretty Woman* and *Erin Brockovitch* where women's employment is determined by their personal appearance.

Activity: Have students discuss in groups, how beauty is delineated within different cultures.

Product: Using the proverb "Beauty is in the eye of the beholder", students will create a contemporary collage and be able to defend their selections.

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CROSS-CULTURAL LINK:
Complete some addition and subtraction problems in Mayan glyphs.

HIGHER ORDER THINKING SKILLS (H.O.T.S.) :

Anticipatory Set:	Read the Shel Silverstein poem, "Arithmetic."
Activity:	Show students a slide rule and a T1 calculator. Discuss base number systems, and the Mayan system.
Product:	In groups, students create a new base number system and the symbols to represent it. Exchange with other groups and try to decipher each system. Each group explains how they developed their system. e.g. base 10 = fingers, base 20 = fingers +toes, etc.

13. SCIENCES
Resources: Expedition video #3,MIMI series; AIMS; video clip from *Apollo* 13

:

Anticipatory Set:	View the video of the Mimi.
Activity:	Students will participate in an activity applying the processes of science (observing, classifying, predicting) to discover ways to tell time using shadows and sun positions. e.g. go outside to measure with flag pole, etc.

:

Activity:	Students will give examples of the processes that the Mayan used to determine time and seasons. e.g. sundial

:

Anticipatory Set:	Show replica of Maya calendar.
Activity:	Discuss uses of calendars.
Product:	Make a reproduction of a Mayan calendar.

:
Count in Spanish and tell time to the hour, half-hour, and quarter hour. Learn the days of the week and the month.

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MATHEMATICS/SCIENCE LINK:
Students will link how the Mayan's used their senses and scientific processes to discover and learn about their world.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Show film clip from Apollo 13 where the astronauts view the earth from the moon.

Activity: Using what they know about the solar system, students will recognize the earth's placement. Students will research how the Mayan thoughts on the placement of the planets within the solar system impacted religion, art, and daily life.

Product: Students will generate a way to answer: If the Mayan theory of planet placement were correct how would our lives be different? Findings will be presented on a backboard that will be used in an oral presentation.

JOURNAL JOURNAL ASSIGNMENT:
Write an ode to the sun based on the format of "Ode to a Grecian Urn."

:
Discuss with your family ways that schedules are related to the calendar, particularly in an agricultural setting.

14. READING OR LITERATURE

Resources: "The League of Mayapan"; *The Hummingbird King; Why There is No Arguing in Heaven; Tales and Legends of Ancient Yucatan;* video clips from *The Lion King* and *Urban Legend,* Power of Myth, Tree of Life replicas in various forms

:

Anticipatory Set: View the clip from *The Lion King* where Simba sings "I Just Can't Wait to be King." Then have students listen to selected readings from Mayan literature.

Activity: Students will describe the Mayan culture in terms of its folklore.

e.g. - origin myths, system for choosing the king, significance of ceiba tree

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COMPREHENSION:

Activity: After enjoying a selection from the book and/or video from Joseph Campbell's *The Power of Myth*, or *The Hero with a Thousand Faces*, students will read examples of mythology from a variety of cultures and give examples of similarities and differences among the readings.
e.g. - creation myth from Plains Indians, from Norse mythology, etc.

APPLICATION:

Anticipatory Set: Bring different examples of the "Tree of Life."

Activity: After touching, feeling, and studying various replicas of The Tree of Life, students will produce an explanation of the figures and symbols found on the statue.

Product: Have students create their own Tree of Life with explanations.

INTERDISCIPLINARY LINK:

Read first chapter of Genesis to discover the Jewish perception of Christian.

TECHNOLOGY LINK:

Prepare a Venn Diagram that compares and contrasts creation and evolution.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: View a clip from the movie, Urban Legend.

Activity: Have students read several urban legends and discuss their origins and how they are perpetuated.
Discuss how the internet might promote their use.

Product: Students write their own urban legends and share them in a read around.

HOMEWORK/JOURNAL ASSIGNMENT:

Students respond to prompt: "What is truth?"

EXTENSION:

Ask family members what to explain their favorite myth.

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15. **FOREIGN LANGUAGE**

Resources: flashcards, Spanish Big Book series

KNOWLEDGE:

Anticipatory Set: Sing " Como se dice (fill-in with vocabulary word)en espanol?

Activity: With ten flashcard vocabulary items, follow with same tune with Quiche words. Present written list in the three languages on white board or on overhead projector.

COMPREHENSION:

Activity: Play mix and match game using flashcards. Students respond orally in Spanish, then Quiche, in separate rounds of the game.

APPLICATION:

Anticipatory Set: Tell a story in English using five of the vocabulary words in either Spanish or Quiche.

Activity: Make the story into a rebus story.

Product: Develop a crossword puzzle with Spanish and/or Quiche words.

MULTICULTURAL and/or ESL and/or BILINGUAL LINK:

List ways in which one culture learns another's language. How did the Spanish communicate with the Mayans?

MATHEMATICS/SCIENCE LINK:

Compare and contrast Mayan calendars (civil and religious) to our calendar.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Read a big book in Spanish and English in class.

Activity: Students takes turns reading the story.

Product: Have students write and illustrate a children's big book using Spanish or Quiche vocabulary.

INTERPERSONAL JOURNAL ASSIGNMENT:

Write a four-line poem with target language vocabulary.

HOMEWORK:

Teach your parents the ten words in English, Spanish, and Mayan.

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16. FINE ARTS

Resources: *Guatemala Rainbow; Un Poco de Todo sobre el Tejido Maya; Valores Mayas Ruk'u'x Maya' Na' Oj;* sample weaving, National Geographic October 1989, pp430, 462, *The Maya* by National Geographic pp.16, 185,
West Side Story, Wall Street.

KNOWLEDGE:

Anticipatory Set: Show clips from the National Geographic video, The Maya.

Activity: Identify the Mayan villages on a map using color and patterns of weaving as reference.
e.g. patterns from different clans

COMPREHENSION:

Activity: Create a poster that illustrates the meaning of color in the Mayan culture.
e.g. red means sun

APPLICATION:

Anticipatory Set: Show a clip from the video, West Side Story, that shows the emblems of the gangs.

Activity: Discuss why gangs or cultures develop emblems.

Product: Students work individually or in groups to design a weaving using the Maya colors that add to the meaning of the weaving design.
e.g. like the ones from video

MULTICULTURAL and BILINGUAL LINK:
Learn color names in Spanish and Quiche.

SCIENCE LINK:
Make vegetables dyes related to the Maya color scheme and dye fabric for the puppet show.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Show a video clip from the movie, Wall Street, showing trading on the stock market.

Activity: Students script and design a puppet show about the gathering of the villages for a mercado which includes hand-dyed fabrics.

Product: Present the puppet show and interpret the meanings of the colors in the text.

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INDIVIDUAL JOURNAL ASSIGNMENT:
Discuss how clothing styles over the last four decades have defined our culture during that time period.

HOMELINK:
Discuss with your family how clothing they wore at your age defined the culture of that time.

17. PHYSICAL ED LINK:
Resources: *The Mayas* by Mercedes de la Garza; video clips of baseball and soccer games; video clips of advertising.

KNOWLEDGE:

Anticipatory Set:	Sing "Take Me Out to the Ballgame." Serve the class hot dogs.
Activity:	Students discuss the American national sport of baseball. Then students will listen to a reading of pp. 35-39, and describe the Mayan national sport. e.g. economics, notoriety

COMPREHENSION:

Activity:	Students will devise rules to coincide with the Mayan ballgame, including consequences of winning and losing. e.g. death for winning or losing.

APPLICATION:

Anticipatory Set:	View video clips of baseball and soccer games.
Activity:	Have students mark out a court and play the game with Nerf balls in the gymnasium.
Product:	Have students make a collage of sports pictures cut from various magazines.

MULTICULTURAL LINK:
Compare and contrast soccer to the Mayan ballgame.

MATHEMATICS LINK:
Measure and build the Mayan ball court with masking tape.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set:	Prepare a presentation of various commercials showing celebrities selling products.
Activity:	Discuss the effects of celebrity advertising on youth and adults.

Product: Students create their own advertisements that Mayan celebrities might have used.
e.g. Cartoon- "I lost my head in the game."

INDIVIDUAL JOURNAL ASSIGNMENT:
What is the real purpose of athletics - entertainment, competition, or economics, ie. fame and fortune?

HOMELINK: Talk about the role of athletics in your family.

MORAL/ETHICAL/SPIRITUAL REASONING AND DILEMMAS

TEN SCENARIOS (Must be set in context of unit, but must also relate to the lives of today's students)

1. Producing, Exchanging, and Distributing [Economics]

DILEMMA: We are in dire need of more room for growing crops. We have been ordered to slash and burn a new area of the rainforest. As we survey the area we discover that it is habitat for a rare population of sacred quetzal. What do you do?

2. Transportation

DILEMMA: You need obsidian from an inland volcanic deposit for your bloodletting ceremonies. This deposit is in a city-state inhabited by a peaceful tribe who uses obsidian as their primary currency. How would your tribe obtain the needed obsidian?

3. Communications

DILEMMA: You are Father Sahagun and have been ordered to destroy all Mayan codices because they are considered by the church to be pagan. You realize that the codices are the only written record of the Mayan culture. What will you do?

4. Protecting and Conserving

DILEMMA: You are on a Fulbright Scholarship in Guatemala to study the Mayans. You find a small jade jaguar figure while you are exploring the ruins alone. You know you could easily conceal it and carry it home as a souvenir of your trip. What would you do?

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5. Providing Education

: After being conquered by the Spanish, you realize, as a wise chief, that your language and culture is being lost because speaking your native language is punishable by death. How will you ensure that your culture is not lost?

6. Making and Using Tools and [illegible] Technology

: As a Mayan astronomer using the observatory at Chichen Itza, you think you've discovered an error in the established calendar. If you are correct you will be seen as the messenger of the maize god. If you are wrong then there will be no crops harvested this year, which will lead to your own personal death. What do you do?

7. Providing Recreation

: You have been given the honor of representing your tribe in the ballgame. It hasn't been decided yet if the winners or losers will be put to death. To play or not to play, that is the question.

8. [illegible] and Governing

: You are born a noble and fall in love with a member of the commoner class. You are not allowed to marry outside your social class. What do you do?

9. [illegible] Ethical, and Spiritual [illegible]

:
Due to a drought a human sacrifice must be made at the Well of Sacrifice to the god Chaac. Your family has been honored to supply one of your twin daughters as the sacrifice. What do you do?

10. [illegible] Needs

: At birth the priests determined that you were destined to become a farmer. As you grow up you realize that you have a special artistic talent and can write the codices more artistically than they have ever been done before. How do you inform the priests that they were wrong and that the gods have blessed you with this special talent?

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PRODUCTIVE THINKING SKILLS
DIVERGENT/CREATIVE THINKING

1. **BRAINSTORM MODEL**

   A. **BRAINSTORM ALL OF THE_____:**

   AHA #1. Ways to pay for goods
   AHA #2. Ways to travel from place to place
   AHA #3. Ways to write your name
   AHA #4. Ways to preserve ruins
   AHA #5. Ways to make an arch
   AHA #6. Ways to prepare the soil for planting corn
   AHA #7. Games played with a ball

   B. **BRAINSTORM AS MANY_____ AS YOU CAN THINK OF.**

   AHA #8. school rules
   AHA #9. nature gods
   AHA #10. qualities that make a person beautiful
   AHA #11. jobs for slaves
   AHA #12. uses for numbers
   AHA #13. types of calendars
   AHA #14. character traits that could be taught in a myth

   C. **HOW MANY WAYS CAN YOU COME UP WITH TO_____?**

   AHA #15. communicate
   AHA #16. make music
   AHA #17. have fun

2. **VIEWPOINT MODEL (Human or Animate) (Use Cultural Literacy Terms)**

   A. **HOW WOULD_____LOOK TO A(N)**

   AHA #1. mall; Mayan teenager
   AHA #2. motor boat; Mayan canoeist
   AHA #3. Egyptian tomb; Mayan scribe
   AHA #4. ransacked archaeological site; archaeologist
   AHA #5. glyph; librarian
   AHA #6. tractor; Mayan farmer
   AHA #7 Michael Jordon; Mayan ball player
   AHA #8. town council meeting; Mayan noble

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B. **WHAT WOULD A_____MEAN FROM THE VIEWPOINT OF A(N)_____**

AHA #9. human sacrifice; victim
AHA #10. filed teeth; dentist
AHA #11. field; slave
AHA #12. "0"; Mayan mathematician
AHA #13. eclipse; slave
AHA #14. Popol Vuh; Spaniard
AHA #15. Symphony; Mayan musician
AHA #16. city design; Greek city-state
AHA #17. basketball; Mayan ball player

3. **INVOLVEMENT MODEL (Personification/Inanimate brought to life)**

A. **HOW WOULD YOU FEEL IF YOU WERE ____?**

AHA #1. a cacao bean
AHA #2. a basket carrying a noble
AHA #3. newly discovered stelae waiting to be interpreted
AHA #4. an artifact in the pocket of a vandal
AHA #5. an undiscovered ruin
AHA #6. obsidian sacrificial knife
AHA #7. ball player

B. **IF YOU WERE A_____, WHAT WOULD YOU (SEE, TASTE, SMELL, FEEL)?**

AHA #8. wind god; feel
AHA #9. an ear of corn; see
AHA #10. filed tooth; feel
AHA #11. slave; see or king; see
AHA #12. place holder; see
AHA #13. Mayan observatory; see
AHA #14. Chaac; feel

C. **YOU ARE A_____. DESCRIBE HOW IT FEELS.**

AHA #15. name glyph; feel
AHA #16. natural dye; smell
AHA #17. rubber ball; feel

4. CONSCIOUS SELF-DECEIT MODEL

A. **SUPPOSE**_____. **WHAT** _____?

AHA #1.there suddenly were no more credit cards; what would that mean to a mall?
AHA #2.you take an electric motor back to the Mayans; what would they invent?
AHA #3.they acquired rubber stamps of glyphs; what information would be recorded?
AHA #4.you could see the cities the way the Mayans did; what would you learn?
AHA #5.you were David Stewart growing up among the ruins; what would you hear the glyphs saying to you?
AHA #6.you have a modern crane in Maya times; what would you build?
AHA #7.you must play in the ball game; what rules would you have to know?
AHA #8.you were the son of the king; How would you have friends?
AHA #9.you are the maize god; How would you bless or punish the people?

B. **YOU CAN**_____. **WHAT/HOW**_____?

AHA #10. be the most beautiful. What would you look like?
AHA #11.have the king from a conquered city-state; What would you do with him?
AHA #12.take a calculator to the Mayans. How would you explain it?
AHA #13.tell the Mayans the sun is not the center of the universe. How will they respond?
AHA #14.take a word processor to the Mayan. What would they do with it?
AHA #15.understand all languages. What could you learn?

AHA #16.bring RIT dye to the Mayan. How could they use it?
AHA #17.take lacross rackets to the Mayans. What recreational activities would change?

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5. **FORCED ASSOCIATION MODEL (Use cultural literacy terms here)**

A. **HOW IS _____LIKE_____?**

AHA #1.cacao bean; dollar bill
AHA #2.sacbe; jaguar
AHA #3.stelae; historical record
AHA #4.temple; beautiful woman
AHA #5.classroom; dugout canoe
AHA #6.pencil; chisel
AHA #7.tennis shoe; old friend

B. **GET IDEAS FROM _____TO IMPROVE_____**

AHA #8.Athens; social pyramid
AHA #9.farmer; corn crop
AHA #10.Brittany Spears; personal beauty
AHA #11.Constitution; life for Mayans
AHA #12.Pythagorus; geometry
AHA #13.Einstein; number systems
AHA #14.Aesops; Popol Vuh

C. **I ONLY KNOW ABOUT _____. EXPLAIN_____TO ME.**

AHA #15.English; Quiche
AHA #16.my city-state's design; your city-state's design
AHA #17.the game of *Chance;* Bul(Mayan game)

6. **REORGANIZATION MODEL**

A. **WHAT WOULD HAPPEN IF _____WERE TRUE?**

AHA #1.zero wasn't invented by the Mayans
AHA #2.the Mayans had a measles epidemic
AHA #3.they never invented a writing system
AHA #4.no ruins were found in tact
AHA #5.the pyramids and ruins hadn't survived
AHA #6.Mayans never invented simple machines
AHA #7.Mayans had no rubber balls

B. **SUPPOSE_____ (HAPPENED), WHAT WOULD BE THE CONSEQUENCES?**

AHA #8.the Spanish came to learn from the Mayans
AHA #9.our economy, beliefs, and religion was based on corn
AHA #10.you came home with a tatoo or pierced body part
AHA #11.you are kind-hearted Mayan ruler, and your only living heir is physically handicapped
AHA #12.you are a merchant who can't do math
AHA #13.you are a Mayan astronomer and you discover the earth revolves around the sun
AHA #14.you are a Spanish priest who is discovered hiding Mayan codices

C. **WHAT WOULD HAPPEN IF THERE WERE NO_____?**

AHA #15.rules
AHA #16.weaving looms
AHA #17.team sports

CULTURAL LITERACY/SPELLING LIST

accession
Ahau Can
Amate
antiquities
archaeoastronomy
archaeobotany
archaeology
architecture
artifact
astronomy
base 20
Belize
bloodletting
cacao
Campeche
Caribbean Sea
cenote
Chaac
Chac Mool
chiapas
Chichen Itza
chocolate
civilization
Classic period
Codex (codices)
conquistador (Sp.)
Copan
culture
decipher
dynasty
ecosystem
ecology
equator
ethnobotany
ex
extinct
Father Sahagun
folk tale
glyph
Gulf of Mexico
Guatemala
Haab
hieroglyphic
Huipil
Kukulcan
machete
maize
mano (Sp)
Maya
Mercado (Sp)
merida
metate
Motagua River
mural
obsidian
Pacific Ocean
Palenque
Peten
pyramid
polm
quarry
quetzal
Quiche
Quintana Roo
sacbe
sacrifice
shards
solstice
stela (stelae)
stonemason
sundial
Tikal
transit
Tropic of Cancer
Tropic of Capricorn
tropical forest
Tulija River
Uxmal
Usumacinta River
Yucatan

RESOURCES

Commercial Films/Videos/Television

Aguirre, the Wrath of God
Aladdin
Apollo 13
Black Robe
Crucible
Dances with Wolves
Erin Brockovitch
Fern Gully
Indiana Jones Raiders of the Lost Ark
Indiana Jones and the Temple of Doom
Julius Caesar
Last of the Mohicans
Lion King
Maltese Falcon
Pretty Woman
Royal Hunt for the Sun
Stand and Deliver
ToolTime
Wall Street
West Side Story

Educational Films/Videos

National Geographic - The Maya
National Geographic - Africa
National Geographic - Living Treasures of Japan

Field Trips

Visit the petroglyphs in Torrey Valley

Music

Como se dice? By Neraida Smith from "Cantando" We Learn
Cortez the Killer by Neil Young
Cusco Apurinac I and II - CDs
I've Been Working on the Railroad
John Henry
Take Me Out to the Ball Game

Poetry

Arithmetic by Shel Sliverstein
Casey at the Bat
Prayer of the Corn by Humberto Ak'abal's Selected Poems

Resource People/Mentors

Local area dentist
Historical Preservationist
Member of different ethnic group

Student Resource Books

Ancient Ruins and Archaeology
Captive by Scott O'Dell
First Civilizations by Glyn Daniel
First Book of the Ancient Maya by Barbara Beck
Horizon Book of Lost Worlds by Marshall B. Davidson
Hummingbird King by Argentina Palacios
Maya by Robert Nicholson
Maya Ruins of Mexico in Color by William Fergason
Mayan Enigma by Pierre Ivanhoff
Mayan Town Through History by Xavier Hernandez
Mayas by Demetrio Sodim N.
Mayas: 3000 years of Civilzation by Mercedes de la Garza
Nicha of Guatemala by Carmen L. Pettersen
Rise and Fall of the Maya Civilization by Eric S. Thompson
Sparrow Hawk Red by Ben Michelson
Sun He Dies by Jamake Highwater
Tales of Legends of Ancient Yucatan by Ermilio Gomez
Why There Is No Arguing in Heaven by Deborah Lattimore

Teacher/Professional Books/Periodicals/Software

Books to Build On by E.D. Hirsch
Calliope Magazine
A Coloring Book of Incas
Dictionary of Cultural Literacy by E.D. Hirsch
Faces Magazine
Guatemala Rainbow
Mayas by Bonechi
Mayas by Javier Covo
Maya On the Rocks
National Geographic Magazines

2nd Voyage of the MIMI
Maya Math
Social Studies Resource Guide
Video Series
Time Magazine
Timetables of Science
Timetables of History
Un Poco de Todo sobre el Tejido Maya
World of Man Volume 12
Valores Mayas Ruk'ux Maya' Na' Oj

Websites

www.mjgerson.com/peopleofcorn.html
www.themailbox.com
www.halfmoon.org/beauty.html
www.ARTSTAR.com
www.halfmoon.org/vision.html
www.halfmoon.org/bud.html

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